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(21) International Application Number: PCT/US99/00627 (22) International Filing Date: 11 January 1999 (11.01.99) (30) Priority Data: 09/035,909 6 March 1998 (06.03.98) US (71) Applicant: THE GOVERNMENT OF THE UNITED STATES OF AMERICA as represented BY THE SECRETARY OF THE NAVY [US/US]; Naval Research Laboratory, Code 3008.2, 4555 Overlook Avenue, S.W., Washington, DC 20375-5325 (US). (72) Inventors: ANTONIADES, John, A.; 7522 Cherry Tree Drive, Fulton, MD 20759 (US). BAUMBACK, Mark, M.; 6710 Baltimore Avenue, University Park, MD 20782 (US). BOWLES, Jeffrey, A.; 4102 Sulgrave Drive, Alexandria, VA 22039 (US). GROSSMANN, John, M.; 7905 Roswell Drive, Falls Church, VA 22043 (US). HAAS, Daniel, G.; 901 Malboro Road, Lothian, MD 20711 (US). PALMADESSO, Peter, J.; 5895 Paine Run Place, Manassas, VA 20112 (US).		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published With international search report. (88) Date of publication of the international search report: 4 November 1999 (04.11.99)	
(54) Title: COMPRESSION OF HYPERDATA WITH ORASIS MULTISEGMENT PATTERN SETS (CHOMPS)			
(57) Abstract The intelligent hypersensor processing system (IHPS) is a system for rapid detection of small, weak, or hidden objects, substances, or patterns embedded in complex backgrounds, providing fast adaptive processing for demixing (20) and recognizing patterns or signatures in data provided by certain types of hypersensors (10). This system represents an alternative to prior systems for hidden object detection. The CHOMPS version of IHPS provides an efficient means of processing, compressing and manipulating the vast quantities of data collected by the sensors. CHOMPS uses the adaptive learning module (30) to construct a compressed data set along with scene mapping data for later reconstruction of the complete data set (40).			
<pre> graph TD 100[100] --- 10[HYPERSENSOR 10] 10 -- "{d}" --> 20[DEMIXER MODULE 20] 10 -- "{d}" --> 50[PRESCREENER 50] 20 -- "{Fp}" --> 50 50 -- "{Sp} 55" --> 30[ALM 30] 30 -- "{Ej}" --> 40[DISPLAY/OUTPUT MODULE 40] 20 -- "{Cn}" --> 40 </pre>			

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US99/00627

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) : G06K 9/36

US CL : 382/232, 236, 235

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 382/232, 236, 235

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,491,487 A (GERLACH) 13 February 1996, see entire document.	1,4
X,P — Y,P	US 5,832,131 A (CHOO ET AL) 03 November 1998, see col. 2, lines 36-46	6 — 2, 5
Y	SMITH, M ET AL. A New Approach to Quantifying Abundances of Materials in Multispectral Images, February 1994, see page 2372	2, 5



Further documents are listed in the continuation of Box C.



See patent family annex.

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